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## CORRESPONDENCE.

*The Editor does not hold himself responsible for opinions expressed by his correspondents. No notice is taken of anonymous communications.]*

CUMBERLAND UNIVERSITY, }  
Lebanon, Tenn., Jan. 23, 1882. }

To the Editor of "SCIENCE."

DEAR SIR—When experimenting with the so-called nitrogen iodine a short time ago, I met with an accident which might have been very serious. I had prepared about a grain of this compound by the action of ammonia upon iodine, and it had stood over night in a watch-glass with a slight excess of ammonia. I proceeded to wash it with water preparatory to drying it for use in the lecture-room. When washing it through the third water and stirring it lightly with a glass-rod to make the cleansing more thorough, a violent explosion took place, filling my face and eyes. I washed them as quickly as I could with water and dilute alcohol, and there followed only a slight inflammation of the conjunctiva, which subsided in a few days.

I have repeated the experiment several times, and in every case have found that when the compound stands in an open vessel for twelve hours under ammonia, it contains a compound which is explosive under water upon slight causes. What this compound is I have not ascertained. At the same time the greater part of substance remains undecomposed and is merely scattered about by the explosion. This when dry presents the phenomena of the ordinary iodine. The subject deserves further investigation.

Very truly yours,

J. I. D. HINDS,

## BOOKS RECEIVED.

THE BRAIN OF THE CAT (*Felis domestica*), a Preliminary Account of the Gross Anatomy, with four plates, by BURT G. WILDER, M. D., Professor of Comparative Anatomy, &c., in Cornell University, &c., &c.

This is a reprint from the proceedings of the American Philosophical Society, July 15th, 1881, and is the first of a series of contributions to the knowledge of the brain of the domestic cat. The present paper is divided into four parts, the second of which is a continuation of the paper by Professor Wilder on "A Partial Revision of Anatomical Nomenclature with especial reference to that of the Brain," published in *SCIENCE* on the 19th and 29th of March, 1881. Part III. relates to a number of points suggested for study, in which a knowledge of the cat's brain is not sufficiently understood. The four plates are very elaborate and well executed, and describe with great minuteness all that can be seen by natural vision of the cat's brain, both externally and in section. These valuable papers by Professor Wilder promise to mark an epoch in the literature of this subject.

THE THIRTY-SIXTH ANNUAL REPORT of the Director of the Astronomical Observatory of Harvard College, by EDWARD C. PICKERING. Cambridge, 1882.

An abstract of the report will be prepared for "SCIENCE." The report is a cheering one, speaking of the enlarged resources of the Observatory, the increased number of assistants, and efficient work of all engaged in making observations or their reduction.

THE FORMATION OF VEGETABLE MOULD THROUGH THE ACTION OF WORMS, with Observations on their Habits, by CHARLES DARWIN, LL.D., F.R.S., with illustrations. Messrs. D. Appleton & Company. New York. 1882.

As this interesting work will be reviewed in this journal the simple announcement of its publication will suffice.

STUDIES IN ASTRONOMY, by ARTHUR K. BARTLETT, M. D. 2nd edition, revised and rewritten. Published by the author. Battle Creek, Michigan. 35 cents.

As an introduction to the science of Astronomy, this little book presents many advantages, the subject is well handled and presented in a very attractive form.

BULLETIN NO. 1 of the American Museum of Natural History, December 23, 1881. Three articles by Professor R. P. Whitfield, illustrated.

This publication has been produced in a form worthy of the establishment that issued it. It proposes to be one of the most valuable bulletins published by scientific institutions.

BUREAU OF EDUCATION. Circulars of Information, No. 4, 1881; Washington, 1881.

This is an exhaustive description of the work of education in France.

PROCEEDINGS OF THE AMERICAN SOCIETY OF MICROSCOPISTS. Fourth Annual Meeting held at Columbus, Ohio, August, 1881.

This publication, which does credit to the publication committee, contains several valuable papers with seven pages of illustrations, and will be noticed at greater length on another occasion.

HOW TO SEE WITH THE MICROSCOPE, by J. EDWARDS SMITH, M. D.; Duncan Brothers, Chicago.

This book has been severely handled by some critics, but in our opinion it contains more original writing than any book on the subject issued during the last two years, and, coming from the hands of a thorough expert microscopist, merits attention from all using the instrument. The work would be useless to a beginner, who should use Professor J. Phin's excellent little manual, but to one who has made some progress with the instrument Professor Smith's work will prove quite useful.

## LUMINOUS INTENSITY OF THE VOLTAIC ARC.

M. Niaudet, in his excellent work, *les Machines électriques à courants continus*, gives quite an exhaustive treatise on the voltaic arc; he particularly dwells upon the arc obtained by a continuous current, the positive pole above, and the negative below and on the same vertical line. It is to this case that the following extract has reference:

"Relative luminous intensity of the carbons.—It is very easy to see that the light directed against the lower pole is very much greater than that carried against the top. To see this, it is only necessary to place the two hands, the one above and the other below the arc, and to observe them. The difference is striking.

M. Fontaine has taken a series of photometric measures in a vertical plane, and in all planes varying from the horizontal to the vertical above and below the horizontal plane passing through the arc.

These experiments have proved that the intensity is maximum between 45° and 60° below the horizontal plane, and that it is about ten times greater than the intensity measured at 45° above the horizontal plane. In the same investigation, M. Fontaine has compared the luminous intensities of the voltaic arc furnished by a machine with alternate currents, with those we are now discussing. The same mechanical work was employed in the production of both arcs; the intensity was the same in the horizontal plane; but the mean intensity was much less.

According to M. Fontaine, the mean intensity of the light given by the first arc is three times that given by the second."